

- 12
- (B) a polyether-system ion-conducting polymer;
- (C) an ion source comprising: (i) a source of at least one carboxyl group or sulfo group being selected from the group consisting of hydrocarbon acids containing 6-54 carbon atoms, sulfonic acids and organic polymers with at least one bonded carboxyl group or sulfo group, and (ii) a source of at least one metal ion that is selected from the group consisting of sodium ion, potassium ion, lithium ion, magnesium ion, and zinc ion and that can react with the carboxyl groups or sulfo group of (i), solid electrolytes or polymer electrolytes; and
- (D) a plasticizer of the aforementioned polyether-system ion-conducting polymer (B).

REMARKS

The Specification has been objected to because an abstract was not present. An abstract has been added (see above).

Claims 8, 10, 16 and 19 have been rejected as anticipated under 35 U.S.C. 102(b) by JP 01245045, which is concerned with ABS containing compositions. These claims no longer claim ABS as component (A).

Claims 1-2, 5 and 12-13 have been rejected under 35 U.S.C. 103(a) as obvious over Ueda et al. ('098). Applicant's claims clearly require the presence of (A) polymer(s) of a specified class, (B) an ion-conductive polyether based polymer, (C) an ion source of a specified type and (D) a plasticizer for the polyether based polymer. It is true that ingredients (A), (B) and (C) of Applicant's invention do appear in '098. However ingredient (D) appears in '098 only in a laundry list of materials that can be added to polymer formulations at col. 12, lines 12-25. There is no indication that any of the ingredients in the laundry list will improve (lower) the surface resistivity of the composition. Applicant has clearly shown that (D), a plasticizer for (B), does lower the resistivity of compositions having ingredients (A), (B) and (C). Comparison of the results in Table 1 for PE1 and CE5 clearly show that addition of the plasticizer lowers the resistivity of the composition. This is a surprising result, since the plasticizer itself is nonconductive. There is nothing within '098 that even hints that a plasticizer for the ion-conducting polymer will lower the resistivity of such a composition, nor does '098 particularly point to the use of plasticizers in general.

The Examiner has also remarked on the fact that the resistivities of the present compositions are in the same range as the compositions of '098. This is correct. The purpose of citing the two examples in the present application was not to compare them with '098 but to show that the presence of plasticizer has an unexpected effect. Nothing in the law says that an invention must be superior, just that it be useful. The composition of '098 is preferably (see Abstract) a polyetheresteramide, another polymer, a compatibilizer and an alkali or alkaline earth metal halide. The present composition comprises (A), (B), (C) and (D) (see above), and in one sense could be said to differ from the composition of '098 in containing a plasticizer (for the ion-conducting polymer) instead of a compatibilizer. Again, '098 gives no hint such a plasticizer may improve the antistatic properties of these types of compositions. It is therefore believed this rejection is overcome.

Claims 3-4, 7, and 11 have been rejected under 35 U.S.C. 103(a) as obvious over '098 in view of Mukohyama ('857) or Brink et al. ('987). Firstly, the discussion of '098 immediately above is included here by reference. Secondly, Examiner has failed to make a *prima facie* case of obviousness, because "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." In re Geiger (CAFC 1987) 2 USPQ2d at 1278. There is no reason to combine '098 with either of these references because (a) '098 does not specifically point to the use of plasticizers in such a composition, and (b) '857 and '987 are not concerned with antistatic compositions. Applicant believes this rejection is based on impermissible hindsight, "One of more difficult aspects of resolving questions of nonobviousness is necessity 'to guard against slipping into the use of hindsight'; thus court that is deciding issue of obviousness must look at prior art presented from vantage point in time prior to when invention was made, ..." In re Carroll, (CCPA 1979) 202 USPQ 571. There is no reason to combine these references with '098 any more than there is a reason to combine any other references on polymer compositions with '098, in the absence of knowledge of Applicant's invention. Even if a *prima facie* case of obviousness is established, the combination of these references does not render the invention obvious because (1) the plasticizers of '857 and '987 are clearly plasticizers for the polyesters contained therein, while the

present claims require the plasticizer to be a plasticizer for the ion-conducting polymer (these may possibly overlap, that is the plasticizer may also plasticize the other polymer), and (2) because of the surprising effect of the use of specific plasticizer required in the present application. "Proof of unexpected improvement is persuasive rebuttal of prima facie case of obviousness." In re Murch (CCPA 1972) 175 USPQ 89, and therefore this rejection is believed to be overcome.

Claim 6 is rejected under 35 U.S.C. 103(a) as obvious over '098 in view of JP 01163252 ('252). The deficiencies of '098 as a reference for obviousness against the composition of claim 6 has been described above and is included here by reference. Apparently '252 is cited to show that antistatic compositions are known for the use of claim 6. Even if this were true, it does not cure the deficiencies with respect to '098 and the compositions presently described, and hence claim 6 is not rendered obvious by this combination of references.

Claims 14-15 have been rejected as obvious under 35 U.S.C. 103(a) over '098 in view '857. For the reasons given above in combining '098 and '857 a *prima facie* case of obviousness has not been made. The combination of the references and motivation stated by the Examiner were made in hindsight. Again there is no more motivation to combine these two references as there is to combine any two references on the subject of polyester compositions. Most of the time it is desirable to have moldings with good surfaces and impact resistance. This is not a motivation to combine these specific references since '098 does not mention any particular problems with these types of properties and in fact says the moldings of '098 have good mechanical properties (col. 2, lines 22-24). In addition '098 does also not mention problems with crystallization rate. Because "Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be 'an illogical

and inappropriate process by which to determine patentability” *In re Rouffet*, (CAFC 1998) 47 USPQ2d 1453, these claims are not rendered obvious by these references.

Again, even if a *prima facie* case of obviousness has been established, the use of the specific plasticizer required by these claims is not suggested by '098 or '857, and neither do either of these references even hint at the unexpected positive effect obtained by adding such a plasticizer.

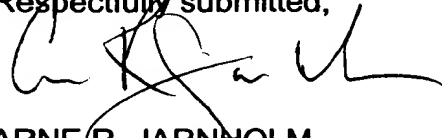
Claims 8, 10, 16 and 19 have been rejected under 35 U.S.C. 103(a) as obvious over '058. This rejection is similar to the rejection of Claims 1-2, 5 and 12-13 under 35 U.S.C. 103(a) as obvious over Ueda et al. ('098), which was described above. The answer to that rejection, given above, is equally applicable to this rejection and is included here by reference.

Claims 17-18 have been rejected as obvious under 35 U.S.C. 103(a) over '098 in view of '857 or '987. The rejections of Claims 3-4, 7, and 11 under 35 U.S.C. 103(a) as obvious over '098 in view of '857 or '987 and the response to that rejection is also applicable to this rejection and is included by reference here. Also the defects noted for '098 in the rejection of Claims 1-2, 5 and 12-13 under 35 U.S.C. 103(a) as obvious over '098 are also applicable to this rejection and that answer is also included here by reference. Because of these answers it is believed this rejection is overcome.

Claim 20 has been rejected as obvious under 35 U.S.C. 103(a) over '098 in view of '252. This rejection is similar to the rejection of Claim 6 under 35 U.S.C. 103(a) as obvious over '098 in view of '252, and the answer to that rejection of claim 6 is included here by reference. It is believed this is sufficient to overcome this rejection.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, deleted material is shown as bracketed., and inserted material is shown underlined..

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TC 1700

IN THE SPECIFICATION:

In the specification after the claims, insert the following page.

ANTISTATIC POLYMER COMPOSITION AND MOLDING THEREOF

Abstract of the Disclosure

Antistatic polymer compositions comprising a polymer, an ion-conductive polymer, an ion source, and a plasticizer for the ion-conductive polymer are described. They are useful for various types of moldings, such as for transfer medium-separating guide parts.

IN THE CLAIMS:

Cancel Claim 9.

[9. The composition of Claim 1 further comprising water-repellent comprising fluorinated compounds, silicon compound or a mixture thereof.]

8. (twice amended) An antistatic polymer composition characterized in that it comprises:

- (A) one or more polymers selected from the group consisting of **[ABS (acrylonitrile butadiene styrene),]** polyethylene, polypropylene, polypropylene copolymer and EPDM(ethylene/propylene/diene) elastomer;
- (B) a polyether-system ion-conducting polymer;
- (C) an ion source comprising: (i) a source of at least one carboxyl group or sulfo group being selected from the group consisting of hydrocarbon acids containing 6-54 carbon atoms, sulfonic acids and organic polymers with at least one bonded carboxyl group or sulfo group, and (ii) a source of at least one metal ion that is selected from the group consisting of sodium ion, potassium ion, lithium ion, magnesium ion, and zinc ion and that can react with the carboxyl groups or sulfo group of (i) . solid electrolytes or polymer electrolytes; and

(D) a plasticizer of the aforementioned polyether-system ion-conducting polymer (B).